Attorney Docket No.: 033970 R 003

Application No.: 10/018,362

IN THE SPECIFICATION:

Please make the following amendments in the Specification.

Please amend the first full paragraph on page 26, beginning at line 1 as follows:

b) Catalytic combustion (Φ < 250µm): The pre-hydrolysis displaces the biomass in the

direction of the combustion of mineral coal. The main characteristic is that combustion is no

more limited by the mechanism of the oxygen transport into the catalytic cellulignin and of CO

therefrom due to the particle microstructure. In this way, there is physical (O₂) and chemical (O)

adsorption in active sites and Boudouard's reaction is favored. Reactions of hydroxylic groups

cause rapid reactions in the heating and solid pyrolysis zones. The catalytic combustion occurs

in the average internal surface (2.0 m²/g), the contribution of the external surface (0.1 m²/g) of

the particle being secondary. The framework of the catalytic cellulignin is that of a fractal that

burns while maintaining the diameter of the particle approximately constant and decreasing the

particle density. When the wall of the fractal thickness reaches a critical size, a collapse of the

particle (sublimation) takes place. Therefore, the process eliminates the formation of residual

coal, resulting in complete combustion.

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